

Date: Wednesday, 9/13/2006 4:29:58 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BLADE		
Job Number	: 28521		Part Number	: D2741		
Estimate Number	: 10327		Drawing Number	: D2741 REV C		
P.O. Number	: N/A		Project Number	: N/A		
This Issue	: 9/13/2006 S.O. No. : N/A		Drawing Revision	: C		
Prsht Rev.	: NC		Material	: N/A		
First Issue	: N/A		Due Date	: 10/10/2006 Qty: 40 Um: Each		
Previous Run	: 27968					
Written By	:					
Checked & Approved By	:					
Comment	: Est Rev: D 00.11.15 Removed P/O turning - in house processEC Est Rev: E 06-03-20 As Per Rev C JLM Est Rev: F 06.04.20 Added grinding after heat treating EC					

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M4130NB0500X03000	4130 Bar 0.5 x 3.0"	
			
Comment: Qty.: 1.2118 f(s)/Unit Total : 48.4722 f(s)	4130 BAR 0.5 x 3.0"		
Material: 4130 steel bar 0.50" x 3.00"	Batch: M101952		
			
2.0	BAND SAW	BAND SAW	
			
Comment: BAND SAW	Cut blanks 13.850" long +0.063" -0.000"		
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	
			
Comment: HAAS CNC VERTICAL MACHINING #1	1-Machine per folio FA108		

W/O:

## WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA:  Date: 04/12/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date &amp; initial all entries

Date: Wednesday, 9/13/2006 4:29:58 PM  
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Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: BLADE
Job Number: 28521		Part Number: D2741
Job Number: 		
Seq. #:	Machine Or Operation:	Description :
4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE 
5.0	QC8	SECOND CHECK 
	Comment: INSPECT PARTS AS THEY COME OFF MACHINE	En / J.F. 06/09/20 (40)
6.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1 
	Comment: SMALL & MEDIUM FAB RESOURCE 1 1-Deburr ✓ 2-Bend per Dwg D2741	SD 06.09.20 (40) J.F. 06/09/20 (40) SD 06/10/19 (40) FF 06/10/23 (40)
7.0	QC5	INSPECT WORK TO CURRENT STEP 
	Comment: INSPECT WORK TO CURRENT STEP	Job.10.24 (40)
8.0	PG	PURCHASING 
	Comment: PURCHASING Issue P/O: 2325	C 06/10/24 (40)
	Harden material as per Dwg D2741 Min. Ultimate Tensile Strength = 152 ksi (30-40 HRC) Min. Yield Tensile Strength = 141 ksi Test report or Certification required	(40)
9.0	PACKAGING 1	PACKAGING RESOURCE #1 
	Comment: PACKAGING RESOURCE #1 Receive and Inspect for transit damage Ensure Test report or Certification attached	Pl 06/10/08 (40) P 11/11/76 (40)
10.0	QC5	INSPECT WORK TO CURRENT STEP 
	Comment: INSPECT WORK TO CURRENT STEP	Job.11.13 (40)
11.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1 
	Comment: SMALL & MEDIUM FAB RESOURCE 1 Grind off carbon deposits	A.M 06/11/22 (40)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 9/13/2006 4:29:59 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 28521

Part Number: D2741

Job Number:



Seq. #:	Machine Or Operation:	Description :
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12.0	POWDER COATING	POWDER COATING
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Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

FC 06 12/01 (40)

13.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
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Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

10/4/12/05 (40)

14.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 5180

10/4/12/05 (40)

15.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

10/4/12/06

Job Completion



C:\06\11\2104

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

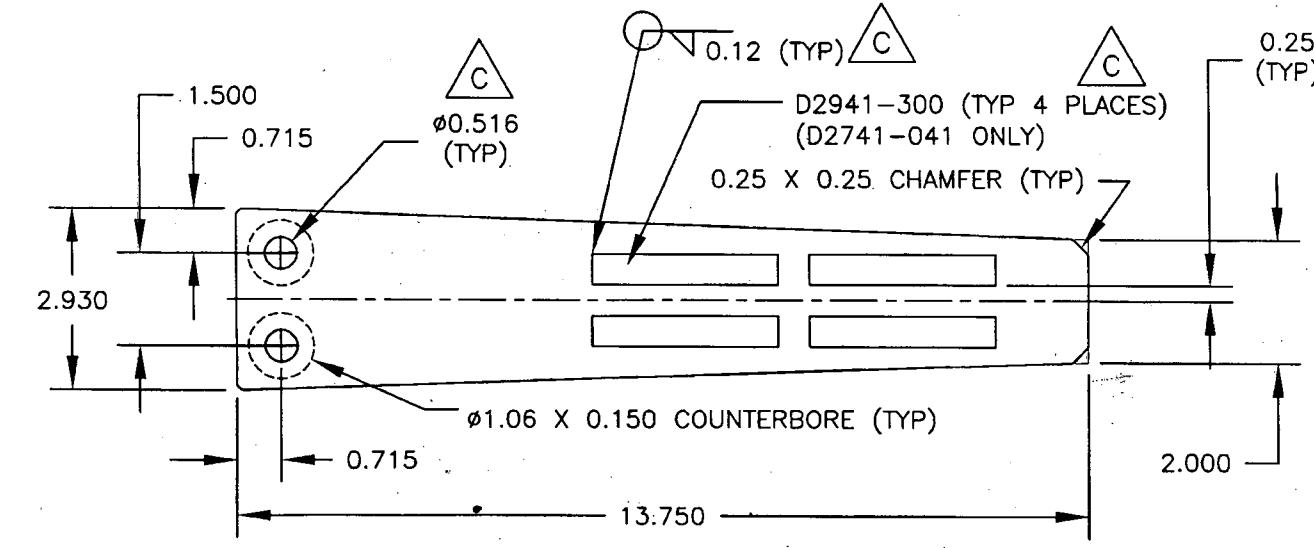
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

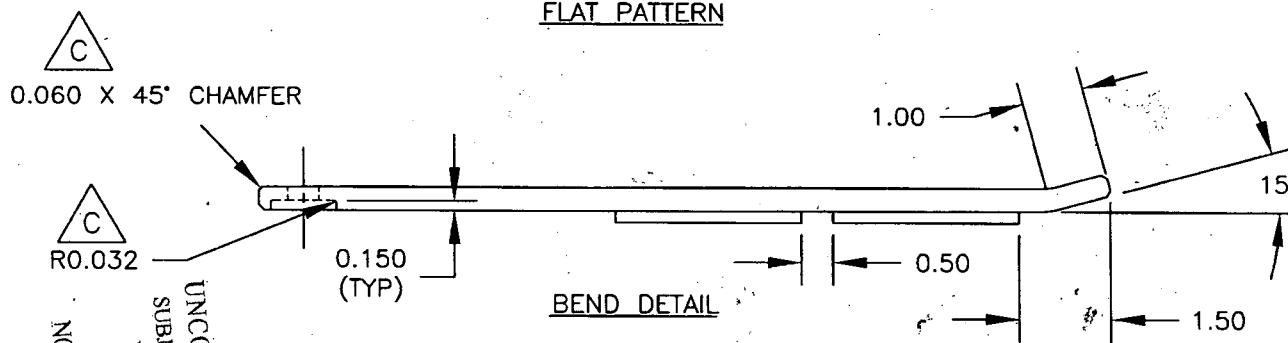
NOTE: Date & initial all entries

**DART****RELEASED**

DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED <i>H</i>	APPROVED <i>H</i>	DRAWING NO. D2741
DATE 06.01.12		SHEET 1 OF 1
A 98.04.16	NEW ISSUE	SCALE 1:3
B 98.09.01	CHANGE C'SINK TO C'BORE	
C 06.01.12	LARGER HOLE, ADD RADIUS AND CHAMFER ADD -041/-043 OPTIONS	



FLAT PATTERN



BEND DETAIL

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER NO. 28521

D2741 BLADE

- 1) MATERIAL: AISI 4130 STEEL 0.375 THICK  
MIN. ULTIMATE TENSILE STRENGTH = 152 ksi (34-40 HRC)  
MIN. YIELD TENSILE STRENGTH = 141 ksi
- 2) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.030 TO 0.060
- 6) TO MAKE D2741-041, WELD D2941-300 (4) AS SHOWN ABOVE.  
REMOVE POWDER COAT FROM SURFACE OF D2941-300
- 7) TO MAKE D2741-043, WELD 7560 HARDCOAT ROD INSTEAD OF D2941-300

DART AEROSPACE LTD	Work Order:	28521
Description: ISLAND	Part Number:	D2741
Inspection Dwg: D2741 Rev: C		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      X Prototype

Measured by: <u>En</u>	Audited by: <u>gjl</u>	Prototype Approval: _____
Date: <u>06/09/18</u>	Date: <u>06/09/18</u>	Date: _____

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

GST No. : R105468102

OAK 80698-1

HEAD OFFICE  
 1371 SPEERS ROAD, OAKVILLE, ONTARIO  
 CANADA L6L 2X5  
 TEL: (905) 827-4171 FAX: (905) 827-7489

2009 WYECROFT ROAD, UNIT B  
 OAKVILLE, ONTARIO  
 CANADA L6L 6J4  
 TEL: (905) 827-7377 FAX: (905) 827-1380

QUEBEC DIVISION  
 7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC  
 CANADA H4S 1C5  
 TEL: (514) 334-4240 FAX: (514) 334-6269

11/06/2006

MM/DD/YYYY

PAGE : 1

1DAR01

BILL TO: DART AEROSPACE LTD.  
 1270 ABERDEEN ST.  
 HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.  
 1270 ABERDEEN ST.  
 HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
11/06/2006		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
PO00002325		COD

PART NO.	DESCRIPTION	UOM	QTY ORD	QTY SHPD.	TEST RESULTS
D2741	B28521 BLADE	EA	40	40	

Process-Specifications: Procedure: 4161  
 HARDENED PER DWG. D2741 TO 152 KSI MINIMUM  
 100% HARDNESS TESTED PER ASTM E-18  
 HRC 34-40  
 MATERIAL: 4130

100% HARDNESS TESTED  
 40 ps. (39/40) HRC

6/11/13  
 06/11/13  
 25/11/13  
 V.A.I.O.  
 TH.  
 Q.C.

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

*Laura Freeman*  
 Authorized Q.C. Inspector

V.A.I.O.  
 TH.  
 25  
 Q.C.



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT  
 TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

